WHAT IS CLAIMED IS:

1. A method for separating electrical runout from mechanical runout, said method comprising:

positioning at least one position probe such that the position probe measures a position of a rotating part;

positioning at least one proximity probe adjacent the rotating part; and

calculating an electrical runout based on measurements obtained from the position probe and the proximity probe.

2. A method according to Claim 1 wherein said positioning at least one position probe further comprises positioning at least two position probes 180° circumferentially separated from each other.

3. A method according to Claim 1 wherein said positioning at least one proximity probe further comprises positioning at least one proximity probe adjacent at least one position probe.

4. A method according to Claim 1 wherein said calculating an electrical runout further comprises calculating an electrical runout for a data point utilizing a difference between a measurement from the position probe and a measurement from the proximity probe.

5. A method according to Claim 2 wherein said positioning at least one proximity probe further comprises positioning at least two position probes 180° circumferentially separated from each other such that one position probe substantially co-linear in an axial direction to the proximity probe.

6. A method according to Claim 1 wherein said positioning at least one position probe further comprises positioning at least four position probes against a rotating part.

7. A method according to Claim 1 wherein said positioning at least one position probe further comprises positioning at least four position probes against a rotating part such that the probes are co-planer.

8. A method according to Claim 1 wherein said calculating an electrical runout further comprises calculating an electrical runout based on measurements obtained from the position probe and the proximity probe utilizing a linear variable differential transformer data collection system.

9. A method for facilitating a reduction in a piece of rotating equipment slow roll test failures, said method comprising:

measuring at least one of a concentricity value, an out of roundness value for a proximity surface of a rotor, and an out of roundness value for a journal surface of the rotor prior to the rotor being assembled in the rotating equipment;

measuring an electrical runout;

determining a predicted slow roll runout value of the rotor;

comparing the predicted slow roll value to a pre-determined value; and

re-working the rotor when the predicted slow roll value exceeds the pre-determined value.

10. A method according to Claim 9 wherein said measuring at least one of a concentricity value, an out of roundness value for a proximity surface of a rotor, and an out of roundness value for a journal surface further comprises measuring at least one of a concentricity value, an out of roundness, and a concentricity of the rotor with a plurality of position probes at a plurality of rotor diameters.

11. A method according to Claim 10 wherein said measuring at least one of a concentricity value, an out of roundness, and a concentricity of the rotor with a plurality of position probes further comprises measuring at least one of a concentricity value, an out of roundness value for the proximity surface, and an out of

roundness value for the journal surface with at least four position probes at a plurality of rotor diameters such that at least two diameters have at least two position probes thereadjacent.

12. A method according to Claim 9 wherein said measuring an electrical runout further comprises measuring an electrical runout utilizing at least one proximity probe.

13. A method according to Claim 12 wherein said measuring an electrical runout with at least one proximity probe further comprises measuring an electrical runout utilizing an eddy current probe.

14. A method according to Claim 9 wherein said calculating a predicted slow roll runout value further comprises:

calculating a predicted slow roll runout value for a right probe; and

calculating a predicted slow roll runout value for a left probe.

15. A method according to Claim 14 wherein said calculating a slow roll runout for a right probe comprises adding a plurality of vectors together, said calculating a predicted slow roll runout value for a left probe comprises adding a plurality of vectors together.

16. Inspection apparatus for a rotating part, said apparatus comprising:

a data collection system;

a plurality of position probes electrically coupled to said data collection system, said position probes disposed adjacent the rotating part;

at least one proximity probe electrically coupled to said data collection system, said proximity probe disposed adjacent the rotating part; and

at least one of a computer electrically coupled to said data collection system and a processor within said data collection system, at least one of said computer and said processor configured to calculate an electrical runout.

17. An apparatus in accordance with Claim 16 wherein said position probes disposed adjacent the rotor at a plurality of rotor diameters.

18. An apparatus in accordance with Claim 17 wherein said position probes disposed adjacent the rotor at a plurality of rotor diameters of the rotor such that at least two diameters have at least two position probes disposed thereadjacent.

19. An apparatus in accordance with Claim 16 wherein said computer further configured to predict a slow roll value utilizing the electrical runout.

20. An apparatus in accordance with Claim 16 wherein said at least one proximity probe comprises an eddy current probe.

21. An apparatus in accordance with Claim 19 wherein said computer further configured to determine a predicted slow roll value for a right probe and a left probe.

22. Inspection apparatus for a rotating part, said apparatus comprising:

a data collection system;

a plurality of position probes electrically coupled to said data collection system, said position probes disposed adjacent the rotating part, said plurality of position probes comprise a first probe, a second probe, a third probe and a fourth probe, said first probe substantially 180° from said second probe, said third probe substantially 180° from said fourth probe;

at least one proximity probe electrically coupled to said data collection system, said proximity probe disposed adjacent the rotating part; and

at least one of a computer electrically coupled to said data collection system and a processor within said data collection system, at least one of said processor and said computer configured to:

calculate an electrical runout and to determine a predicted slow roll runout for a right probe by adding a plurality of vectors together, and

determine a predicted slow roll runout for a left probe by adding a plurality of vectors together.

23. Apparatus for predicting a slow roll test failure utilizing a data collection system having at least one probe, said apparatus comprising a computer programmed to:

receive a plurality of probe measurements; and

generate at least one slow roll runout value for at least one of a first probe and a second probe.

24. Apparatus in accordance with Claim 23 wherein to generate at least one slow roll value, said computer further programmed to determine at least one of a concentricity value, an out of roundness value for a proximity surface of a rotor, and an out of roundness value for a journal surface of the rotor prior to the rotor being assembled in the rotating equipment.

25. Apparatus in accordance with Claim 23 wherein said computer is further programmed to generate at least one slow roll runout value for at least one of a first probe and a second probe by adding a plurality of vectors together.